INFORMANT: Andy Knight
INTERVIEWER: Steven Bucklin
DATE: 19 May 1999

SB: [The interviewer Steven Bucklin]
AK: [The informant Andy Knight]

[Beginning of side one, tape one]
[Interview begins]

SB: This is Assistant Professor Steven Bucklin, conducting an interviewing Andy Knight, on the 19th of May 1999, at the Hotel Alex Johnson in Rapid City, South Dakota. Andy Knight, that's k-n-i-g-h-t.

AK: Yes.

SB: Retired as a lieutenant colonel, an O5 in 1985. Your unit of assignment at the time of retirement was?

AK: The, uh, I was the assistant deputy commander for resource management at Minot Air Force Base.

SB: At Minot Air Force Base.

AK: North Dakota.

SB: Um, Okay. You served here with the 44th Wing Command, and you were attached to the 68th...

AK: Strategic Missile Squadron.

SB: Okay. Um, describe your mission, if you would, when you were attached to the 68th, or assigned to the 68th.

AK: I can, that's real easy.

SB: Okay.

AK: Its, uh, it all evolved around the concept of deterrence. And we were on alert, uh, with at that time the 44th Strategic Missile Wing had the Minuteman I missile, which was one missile and one warhead. And we were on alert 365 days a year. Somebody was on alert 365 days a year, 24 hours a day, ready to fire off these, the missiles. Once we, if we ever got what we called the EWO, or the go to war message. And it was authenticated properly. That was the whole concept of deterrence. Deterrence is sort of like a Mexican stand off. Where you got a gun barrel

pointed, at that time Cold War, the Russians, and some of their satellite, the Warsaw Pact countries. And they of course, had a gun barrel pointed at us. Our heads, too. That's the whole concept of deterrences and that was our main mission. And we knew that as along as, as we were pulling alert and doing our job, and accomplishing our mission, we were fulfilling that concept of deterrence.

SB: So it's sort of the idea of mutually assured destruction?

AK: Yeah. The acronym was MAD.

SB: Um hmm.

AK: That's right. That's right. And it was madness. But in one way, uh, it was, but in another way, um, you know, both you and I are still here talking! [laughter]

SB: I guess that's pretty important!

AK: Yeah.

SB: I notice as well that you served in several different um positions. In 1968, you were a crew member. Will you tell us what a crew member was?

AK: Sure. Uh, there were two different types of crew members. There was the missile combat crew commander--m triple c--and there was a dm triple c which stood for deputy missile combat crew commander. And those were the two people who actually pulled the alert duty in the launch control centers. There was just two of them down there at one time. And, um, uh, one person had to be awake at all times. The other person, there was a single cot in the launch control center and one person could be awake, I mean, had to be awake at all times, the other person could sleep. Uh, and the so there was two people in there. The only other time that there was more than two people down in the launch control center was if we were served our meals or if the security, the cook came down. Or what we call crew change over, which always happened in the morning. About 0800 in the morning or so. Uh, sometimes 0900, depending on the weather. And then the crew would come down, we'd do a changeover.

SB: So one cook came down. Was the "no lone zone" applied?

AK: Yes. Always. It was a no lone zone at all times, twenty-four hours a day. There always had to be two officers present in that capsule. And those capsules, the launch control centers, were manned for years and years and years and years and years and years with two officers always

present. And that was required. Couldn't be an officer and an enlisted man. It had to be two officers.

SB: Two officers.

AK: Two launch control . . .

SB: Any particular rank?

AK: No.

[break in recording]

SB: Uh, so, then it also mentions that you were a crew trainer. How long were you a crew member first?

AK: I was a crew member for about eighteen months. And then I upgraded to a missile combat crew commander instructor.

SB: And what were your duties as such?

AK: My primary duty was to train, uh, new crew members that came in from the operational readiness training school in Vandenberg. And also, to train existing crew members, keep their proficiency level up. And I …

SB: That was all in the 68th?

AK: No. That was in the entire 44th Strategic Missile Wing.

SB: Okay.

AK: And when I became an instructor, I left the 68th Strategic Missile Squadron and went to a staff position at the, within the missile wing itself. The director of training.

SB: And then you eventually became senior crew instructor?

AK: Yes.

SB: Um hmm.

AK: Senior Missile Combat Crew Instructor. And that, and in that job I was responsible for all of the, uh, instructors who trained all the missile combat crew commanders, uh crew members, in the wing.

SB: Okay. When did you leave Ellsworth for, uh, Minot?

AK: Uh, well, uh, I left Ellsworth for Offutt Air Force Base.

SB: Offutt?

AK: That was an interim. I actually was at the missile wing, at uh, I went to Ellsworth in October of '68, was assigned to the 44th Strategic Missile Wing from '68 to '72 and then in 1972 I went to the Fourth Airborne Command and Control Squadron. Now that was also located at Ellsworth Air Force Base. And the Fourth Airborne Command and Control Squadron, Fourth ACCS, uh, had a little bit different mission than the Strategic Missile Wing. But I went there as a missile crew member. And I was in what they call an airborne launch control system.

SB: That was Looking Glass?

AK: Yes. Well, that was, not at that time it wasn't Looking Glass, it was, here at Offutt it was just part of the post attack command and control system. And I provided the back-up. Okay, the primary means of launching missiles uh during war-time was all, it was always done between capsules and the interconnectivity that turning the keys and what not. But if the inter-connectivity--we, we did expect that was part of the Cold War and deterrence--we expected, we knew that our, our, uh, uh, missile fields were targeted by the Russians. So we knew that, that, a lot of the incoming rounds would destroy some missiles and maybe some launch control centers, cause each launch control center was about ninety feet underneath the ground. And, um, we also knew that the electrical inter-connectivity would be, uh, disrupted . . .

SB: By the EMP [Electro-magnetic Pulse]?

AK: Yeah, well it could be by EMP or it could be, uh, just by nuclear dig-out.

SB: Um hmm.

AK: You know, bombs landing all over, God forbid. And, uh, so the mission of the Fourth ACCS and the Airborne Launch Control System was to act as a back-up. And we had the capability to actually launch missiles from the air.

SB: And that would via sending a signal to a UHF antenna?

AK: A UHF antenna. Yes. Um hmm. And that was, and that purpose, and they had uh, the Fourth ACCS, the Fourth Airborne Command and Control Squadron at Ellsworth was part of that system, and that, so I went from 1972 to 1976, I just went over to the bomb wing, because it was a flying outfit so we were assigned to the bomb wing. And flew with uh Fourth Airborne Command and Control Squadron until 1976. Then I went, I was

reassigned, I was promoted to major, and was reassigned to Offutt Air Force Base, SAC Headquarters in 1976. And flew again as an airborne launch control system, ALCS, officer. And then, uh, when I made major, I was assigned to the Looking Glass.

[phone interruption]

SB: We were interrupted briefly by a cell phone call to Andy. Um, you want to pick up where we left off?

AK: Sure. Sure. And then I was assigned to the Looking Glass aircraft. And back in those days, they referred to the Looking Glass aircraft as the Doomsday plane, which I think is, was a misnomer. And, uh, because again it was all part of the nuclear deterrence. The Looking Glass was nothing more than a plane that was ordered into the United States 365 days a year, 24 hours a day, with a complete, uh, battle staff, uh, present, along with a general officer present, who, uh, who, and we were in constant contact with the national military command center. They had an alternate national military command, NORAD, and the White House Communications Agency so that we could, we could, if directed by the president, could direct the war from that plane and his plane.

SB: I've got a question for you about that. What if the president were knocked out before the launch codes could be given?

AK: Then there was a chain of command and the chain of command went from the president to the vice president to the uh,

SB: Secretary of State?

AK: Secretary of State. I think . . .

SB: Speaker of the House?

AK: No. No. To the Vice president to the Speaker of the House.

SB: Um hmm.

AK: And then it went from the Speaker of the House, I think to the Secretary of Defense then to the Secretary of State. I can't remember. There was a chain of command . . .

SB: Was there a football in Looking Glass?

AK: Yes. Yes. We had, we had . . .

SB: Do you want to tell us what a football was?

AK: It was the go-to-war codes. And that's the bottom line. It was the go-to-war codes. And it wasn't, it wasn't in a football. It was, it was, uh, kept in a safe, of which, uh, I had the key to the safe, and then, then the uh, the uh general who was flying had the other key. And so it took both of us to open that up . . .

SB: Not unlike it took two people to launch in the capsule.

AK: It's the very same, the very same concept.

SB: You know, I've got a question for you. You mentioned earlier about survivability, um, and the expectation that some LCFs and LFs would be taken out in an attack.

AK: Yep.

SB: There was an expectation, especially from the Kennedy administration onward of our ability to have a flexible response within this sort of mutually assured destruction environment.

AK: Yes. Yes.

SB: Did you think that, or would, um, an LCF or an LF have survived an air burst? A ground burst? Ah . . .

AK: That's, that's. Simply because it never happened. I am sure there were tests that were done down in Nevada and what not. And we had, um, I don't think, I, I, it's my personal opinion that I don't think any Launch Facility or Launch Control Center could have survived a direct hit. It just wasn't possible, I don't think. Because there was these dug-outs. How close it was, I don't have any idea. But we were told that, you know, some LFs and some Launch Control Centers in every emergency war scenario that we practiced, there was always, at least, we always lost Launch Control Centers and Launch Facilities and so we would have to react accordingly.

SB: That surprises me that even Soviet missiles get could through or Soviet bombs could get through before our missiles could be launched. That's essentially the scenario?

AK Yes. Because there was no, there was no anti ballistic missile defense then and there isn't now.

SB: And there wouldn't be sufficient warning of a Soviet launch?

AK: Well, there could be warning, but what are you going to do? I mean, I mean the bottom line is if the Soviets, uh, the Yankee Class submarines were sitting off the East Coast or West Coast, which they were. . .

SB: It would take ten minutes to target?

AK: And, you know, time on target was ten minutes, what are you going to do? I mean, NORAD is going to detect the incoming, so what? [laughter] You just sit there, you know.

SB: Right.

AK: Not much you can do! Except launch yours.

SB: Okay. Uh, how seriously did you take your job?

AK: Deadly serious. We were, uh, we were, it was one of the, it was probably the most, most responsibility that I've ever had in my life. And, uh, and we were tested, uh, constantly. And, um, the tests that we were, whether it was, whether it was multiple choice or written exams. Or whether it was actual training scenarios in the simulator, uh, uh, it, we always had on the written exams one hundred percent was passing, if you missed one question, you failed, and you had to start all over again. So there was no room for error. In the simulators, we used to have, we would call missile procedures trainers, there were, there was room for mistakes. Obviously, because this is how you were trained. But, uh, know it was uh, there was no room for error.

SB: Did you feel that your colleagues and peers shared that . . .

AK: Yes.
SB: Um hmm.

AK: Without a doubt. We had what they called the human reliability, well first it was called Personal Reliability . . .

SB: HRP and PRP?

AK: Yeah. And then it was Human Reliability Program, you know. And it was simply, you know, we monitored one-another. And I know it sounds like Big Brother, but, uh, when it comes to nuclear weapons, there's, you just can't make those errors.

SB: So you had to be aware of the sensibilities of your colleagues and peers.

AK: Yes. If we, if I thought that one of my friends or somebody who was in missiles was drinking too much or had a personal problem, whatever it may be, then it was incumbent upon me to notify the authorities.

SB: Subordinate and superior?

AK: Superiors. Not so much subordinates, but superiors.

SB: Okay. Tell us about you motto. What was the motto? Aggressor Beware?

AK: That was at the 44th Strategic Missile Wing. Yes, it was the Aggressor Beware.

SB: And did that, did that say something about your sense of mission?

AK: Yes. Yes. I think that looking back on it, um, you know, each, each squadron had their own, their own, uh, slogan. And they were always, like the Aggressor Beware was, uh, the 44th Strategic Missile Wing.

SB: Did it reflect, um, American nuclear policy at all?

AK: Yes.

SB: And what was American nuclear policy? Uh, would we use our missiles under first strike conditions?

AK: If we were told to, yes.

SB: Okay. America, America has foresworn first use of nuclear weapons, though.

AK: When you say “foresworn,” what do you . . .?

SB: That we will not be the first to use nuclear weapons.

AK: Yeah, we have said that, yes. But, uh, again . . .

SB: But if you got the order to go ...

AK: But if I got the order to go, then, you know, we were trained to the extent we were just like Pavlov’s dog.

SB: Um hmm.

AK: It was just, you know.

SB: Okay. Did you think that the threat of Soviet attack was real?

AK: Yes.

SB: Why?

AK: Primarily because of the intelligence updates that we were getting and, uh, later on, when I went to the Looking Glass air craft, we were privy to the satellite photography and imagery. And please remember this was over twenty-five years ago, or twenty years ago actually, when I was flying the Looking Glass. And the imagery that everybody thinks of today was present back then. It was just very highly classified. And we knew, you know, we knew where their targets were. We knew, uh, we were tracking their submarines. So we knew it was a very real threat. Now, whether or not the accuracy was what it was supposed to be, uh, I've been told since that they weren't entirely accurate as they are now.

SB: Yeah. I think one thing that has become clear, uh, but I'll ask you anyway, it has become clear to me over the course of the interviews I've conducted. Did you have faith in our missiles' superiority over the missiles, the Soviet counterparts?

AK: Yes. I have the, when I was the missile squadron commander up in Minot, I was a task, also a task force commander. The Air Force has a program, back then they called it "Glory Trip." The Glory Trip missions where they would arbitrarily pick a missile from a particular wing and that was on alert, sitting in a Launch Facility, and, uh, they would take that particular, they would designate that particular missile as a Glory Trip missile. What that meant was, the only thing that we were to do with it was to remove the warheads and, I use warheads in the plural sense because at Minot they have three warheads.

SB: Those were Minuteman IIIs?

AK: Yes. And at Ellsworth you only have one. And we would take the missile out to Vandenberg Air Force Base, and the only thing we were allowed to do was to take off the warheads and put dummy warheads on. And then we would launch that missile from Vandenberg Air Force Base down to the, uh, target range, which was, uh, the Kwajalein/Eniwitok atoll. And that was, uh, a little over three thousand miles down range. And, um, sure they'd have some, but generally speaking, most of the time they were all within two, three, four hundred feet of the target.

SB: That give you a sense of satisfaction?

AK: Yes.

SB: To see birds in flight?

AK: Yes. And to see them hit where they're supposed to.

SB: Where they're supposed to. Something that I haven't asked anyone else yet, but it comes to mind now, is that, um, not too long ago, uh, a missile was launched, actually not a missile, a rocket was fired out of Norway. And it was a NATO rocket test fire. And they had notified the CIS, the Commonwealth of Independent States, that we call Russia now. And apparently the notification didn't reach the Kremlin and, as a consequence, Russia put its nuclear forces on alert. What did you think the possibility was for an accidental launch?

AK: An accidental launch?

SB: Under those types of circumstances.

AK: As far as we were concerned, I don't know about the Russians, but as far as the Air Force was concerned, it was zero. I think.

SB: Did the Soviets inform us of their test launches and did we inform the Soviets of our test launches to avoid those types of misunderstandings?

AK: Yes. Now when I say accidental launch, or when you said accidental launch, I'm talking about the physical turning of the keys, 'cause you know …

SB: No, I was talking about the lack of communication.

AK: Oh, lack of communication.

SB: That almost led to the Soviet's launching …

AK: Yes. I, I, you know, I felt, I feel, very confident that communication link was there. That the red telephone, what not. I had the occasion once to go down into the National Military Command Center, um, uh, in the Pentagon. And, um, this was in the late seventies, early eighties. And, um, uh, I actually saw the red telephone so to speak.

SB: Um hmm.

AK: And, uh, they always back that up with printed teletype. So in other words, we have a Russian interpreter right there and he'd type in what was being said on the telephone and they'd shoot that up to us. So I mean it was I, I, …

SB: So there was some redundancy?

AK: Oh yes. Without a doubt. Without a doubt.

SB: Okay.

AK: Um, there were some close calls. But not in that respect.

SB: Can you tell us about the close calls.

AK: Well, yeah, I think so, cause I think it's been since declassified. In fact, I know it is 'cause I saw one, one incidence on the Discovery Channel. [laughter] Where, um, they were running, they, the Air Force, was running some training tapes down at NORAD. And, um, somehow, one of the people down at NORAD at the Combat Operations Center, got a training tape, somehow it got into the real system. And it was a lot of incoming. And uh, I happened to be flying the Looking Glass plane that morning, and um, that it happened, and um, boy, we got the go-to-war, the initial incoming . . .

SB: You got the actual?

AK: It wasn't the go-to-war message, no. No. But it was incoming. And it was a sit rep, what we call a sit rep message.

SB: And you want to tell us what that acronym stands for?

AK: Ah, I can't, I forget now. But I remember sit rep.

SB: That's alright. [laughter]

AK: I can't remember . . . situation something. But at any rate. And, um, I nudged the general next to me. I said "This is real." And then of course we had the satellite communications back then. I mean everything was satellite back then. And um, much as it is today. But then it was mostly **** [And, um, uh, we were immediately plumbed into NORAD.

[phone interruption]

SB: There we go. We were interrupted by a phone call. Going back to sit rep, we have determined that it's like the situation report. And you were plugged into NORAD?

AK: And the National Military Command Center and the alternate National Military Command Center and the White House Communications Agency and the Primary Alerting System which was the PAS for all strategic air

command. And that was all done via satellite communications. We immediately determined through the authentication procedures that were in existence at that time that NORAD had a problem. And, uh, and it was authenticated out and, the system worked the way it was supposed to.

SB: When you say immediately, how, what time frame?

AK: Within ten seconds.

SB: So how long, how long were you thinking that the balloon had gone up?

AK: Oh, about ten or fifteen seconds.

SB: That was it?

AK: It was not a pleasant . . .

SB: I was going to say was there a sense of relief, collective?

AK: Yes, without, without, it's kind of interesting, though, because, again, as I've said, we were trained, we were trained, to, to, react just like Pavlov's dog and that's exactly what we did.

SB: So, is what you said you recalled a couple incidents?

AK: That was one, yes. Uh, there was another, uh, one. I was stationed with Fourth ACCS, that would be between '72 and '76, and I think it was in the Six Day War with uh, with uh, between Egypt and Israel, when we were, we went into an increased DEFCON. We went to a DEFCON 3.

SB: I think it was in October of 1973.
[Yom Kippur War began 6 Oct. 1973. Six Day War began 5 June 1967.]

AK: Yeah. Yeah. And I was on alert up at Minot on the, in the post attack Command and Control System. And, uh, we went out to the points. We sat on the planes for twenty-four hours, waiting to go. That's not a pleasant feeling.

SB: I'm sure. Uh, how would you describe morale among missileers?

AK: Then it was just great. Super. Um, it, it there, there, at times it was very stressful. And so, you know, we would, we would let off steam, at least I would encourage my folks to let off steam. There is always a time to work, but then, you know, a time to play, too.

SB: So how do you let off steam?

AK: Oh, you name it, we did it! [laughter]. We had a lot of parties, a lot of squadron parties, missile wing parties, that kind of thing.

SB: Um hmm. Sporting activities?

AK: Uh, yeah, yeah. But primarily parties.

SB: Um hmm.

AK: And, I, you know, there was, there was drinking and what not. But I mean, still, you know, its, it blew it off, the steam that way.

SB: Um hmm. And your keeping an eye on each other.

AK: Oh yeah. Yeah. Nobody was allowed to drive that had too much to drink and that kind of thing.

SB: You know, you said “then it was super,” which implies to me that perhaps later on it wasn’t “super”?

AK: I think as time went on, uh, it, it, the missileer, the missileer in the sixties and the seventies, it was uh I think a very ...

[cell phone interruption]

SB: We think that was our last phone call! We’re talking about morale then in the sixties and seventies.

AK: I think the morale in the sixties and seventies was, uh, was great. Because it was, missileers then, I think, were selectively manned. But as, as time went on, and as the, uh, in the eighties and then when once the Cold War, uh, dissipated, uh, then I think the morale kind of, kind of went down-hill.

SB: Do you, do you think that any of the strategic arms limitation negotiations--SALT-1, SALT 2, START, INF--do you think that affected morale?

AK: Yes, but I think it affected not, not negatively. I think it affected them in a positive way. Because again, that meant that deterrence, the concept of deterrence, was working.

SB: Um hmm.

AK: Uh, I think what affected morale more than anything else in the eighties, what not, was, uh, missileers were not getting promoted as fast, or as fast as they were in the sixties and seventies.

SB: Was there a sense that the missileers were sort of second class citizens in the Air Force?

AK: Probably.

SB: Um hmm.

AK: If you're not a pilot, then ... [laughter]

SB: Okay. And so their promotions weren't coming as rapidly?

AK: Um hmm.

SB: Opportunity was thus limited?

AK: Um hmm.

SB: Okay. Uh, missileers were screened psychologically, weren't they?

AK: Yes.

SB: And what were they looking for?

AK: Obviously, emotional stability. Uh, they were, all missileers had to have a top secret, uh, cryptographic clearance, so the uh, the, uh, at that time I think it was the Defense Intelligence Agency that's doing the background checks. And they were pretty good background checks.

SB: So, if you were a missileer and you believed you were no longer able to conduct your duties, could you opt out?

AK: Oh, without a doubt!

SB: Um hmm. And were you encouraged to do so?

AK: Yes. Yes. If you, if you felt that you couldn't turn the keys, then yes, by all means.

SB: Did you ever experience a problem with a fellow capsule crewman?

AK: Not me personally, but, uh, I've heard of people.

SB: And what kind of problems did you hear?

AK: They just decided that they couldn't turn the key if, if ordered to through the authentication process.

SB: Would they face any recrimination for telling their superiors that "I can't do this"?

AK: No. They were decertified and sent to another field.

SB: So, it wasn't career threatening? You could still stay in the Air Force.

AK: Oh, yeah. You could, you could still stay in the Air Force, but career threatening it probably was. But you could still stay in the Air Force. They'd just put you in supply or something.

SB: And you might not make your next promotion board?

AK: That's right.

SB: Ah. Okay. Um, you mentioned, uh the DEFCON 3, I think, in 1973. Uh, during that period, um, actually in the next year, the secretary of defense was concerned about our president's mental stability. And in fact, issued a directive that if the president tried to launch, it could not be done without the secretary of defense's counter signature. Were there any circumstances under which you would have refused a launch order.

AK: No.

SB: No?

AK: None. Providing, well, providing I had the right authentication. If the message did not, if the launch order did not authenticate out, then well, obviously it wasn't a good message, we wouldn't have launched. So that's one. If you're, if, if everything was in order and it came from the National Command Authority, the NCA, and it authenticated out, no.

SB: So, I think you've already answered this question, but I'm going to ask you again anyway. How did you feel about the removal of the four-hundred fifty missiles we had in South Dakota?

AK: Oh, yes. Well, there was, it was, well, in South Dakota, there was only 150. They just closed the 44th SMW. And there's, there's, um, um, there's ten launch control centers and there's fifteen missiles total, correction, there's ten missiles to the fifteen launch control centers, so there's a, there was 150 missiles on alert.

SB: Um hmm

AK: Okay. And so they closed that down a couple years ago. And then they also closed down a couple other wings. And I personally thought it was, it was, uh, okay. And I did not, and I to this day don't think that it will jeopardize uh, deterrence capabilities simply because, uh, we have, at that time we had over a thousand missiles on alert, which would have blown the world apart. And, uh, ...

SB: And that's just land-based missiles? Not including ...

AK: That's just land-based missiles. [laughter]

SB: Not including the submarines and?

AK: Yeah. Yeah. And so, I think it was, yeah, yes

SB: It was militarily justified?

AK: Yes.

SB: Um, I am kind of curious, too, I've sensed a sort of nostalgia among military personnel for the pre, or the post--let me rephrase this--for the old Cold War Days because we had an enemy we knew. And it seemed that there was only one threat. Do you see the post Cold War ...

[cell phone interruption]

SB: I was about to ask you if you think the post Cold War environment poses more of a threat to our national security than in the old days when we just dealt with the Soviet Union?

AK: I think it does. Um, the, the thing that I fear the most is, um, these people like Muammar Ghadafi, Saddam Hussein, now Slobodan ....

SB: Milosovic.

AK: Milosovic. That's a hard name to pronounce!

SB: Um hmm.

AK: Uh, and the proliferation of nuclear weapons in the, in some of the third world countries like Pakistan ...

SB: North Korea.

AK: North Korea. Now China. Of course China always had nuclear capabilities, but they didn't have the delivery system back then, so we didn't have to worry about those people. But I think the threat is still there, and it worries me because some of these third world countries have nothing to lose. They have nothing to lose and, uh, so ....

SB: What do you think of the current debate over ABMs--Anti Ballistic Missile Systems?

AK: I think it's necessary. I think we needed an ABM thirty years ago. And we need one now.

SB: Okay. Did anyone die in the line of duty while you were with the 44th and the 68th?

AK: Uh, yes. Uh, there were, uh, we lost a, uh, helicopter. A Huey Helicopter went down with uh, several security policemen. They were on the way out to, to a Launch Control Center to do a change over thing, and right here at Ellsworth. And, and they went down and there were some security police people killed. Yes.

SB: How did that affect your people?

AK: If I remember correctly, uh, we, we decided, the crew members in the missile wing, we didn't want to fly those Huey helicopters anymore! [laughter] And I think there was a boycott of some kind--it didn't last too long--because we thought they were unsafe.

SB: I want to get back to another question that occurred to me and that is that you served as a crew, a capsule crewman, for a twenty-four hour period, right?

AK: Yes.

SB: And then were relieved. When would your next duty begin then?

AK: Normally, we would pull, on the average of seven to nine twenty-four hour tours a month.

SB: And what did you do in between those tours?

AK: Trained.

SB: Train?

AK: Yes.

SB: Okay. Uh, I want to ask you some sort of environmental questions now, I guess. Where are you from originally?

AK: I was born in Hilo, Hawaii.

SB: Um hmm.

AK: And then, uh, lived in California and Colorado and Michigan and New Jersey and Nevada and then wherever and came into the Air Force.

SB: Married?

AK: Yes. I've been married for twenty-five years.

SB: Children?

AK: Three.

SB: Um hmm.

AK: Three. Three sons.

SB: Um, so when you came to South Dakota, can you describe your impressions of the land, the weather, the terrain?

AK: I, when I came to South Dakota, I got here in October of 1968 and that, that, that was after finishing a, uh, tour in Vietnam. And when I received orders to come to South Dakota, I said, "Ooh." All I could think of was blowing snow and reindeer and tundra! [laughter] And, uh, I got up here and it was one those October, fall October days, Indian summer days, and it was just absolutely beautiful. And I said "Now this is not the South Dakota that I expected." So I got up here and it was, it was just great. And of course, Rapid City is the banana belt. And, uh, and that was in October of 68 and I met my wife, uh, here, and she is a fourth generation Rapid Citian, so her roots go back a long, long ways.

SB: That's unusual.

AK: Yes. And, uh, we got married and uh, then we went up to Offutt Air Force Base and Minot and then when the time came to retire from the Air Force in 1985 there was no question in our mind where we were coming back to.

SB: And it's fair to say you could have gone anywhere, really?

AK: That's right. In fact, I had a job offer from TRW based on my missile experience in the Air Force down in Los Angeles, El Segundo, California. And it's a good paying job, and I turned it down 'cause I didn't want to put up with that lousy environment down there.

SB: So tell me, you're from Hilo, Hawaii originally. What was your first South Dakota winter like?

AK: Surprisingly enough, it wasn't that bad. It really wasn't. Uh, here in Rapid City, you know, it's the banana belt, and we got some, we get snow, we get cold weather, but then we get those warm Chinook winds that come down through here and melt the snow. I'm what they consider a transplant here in Rapid City and South Dakota. I'm not a native South Dakotan. And that's okay.

SB: How did other Air Force personnel deal with South Dakota?

AK: They didn't like it, most of them. It was either, it was either, it was sort of like a love-hate relationship. Uh, they either really loved it or they just couldn't stand it.

SB: And what would you attribute that to?

AK: Some of the people that I've met, uh that are my peer groups, um, they were accustomed, they were from large metropolitan areas, and they were accustomed to more cultural activity than what was offered here.

SB: Um hmm.

AK: And that kind of thing. And that's probably, and that and the weather, a lot of the people from the South that were assigned up here didn't like the weather. I didn't think it was that bad.

SB: Okay. Were you ever stuck on site because of weather?

AK: Many times. During the winter. It was always during the winter. And, um, uh, there was, we would, uh, if there was a big snow storm or a blizzard that came through, then, we weren't relieved, then we had to spend forty-eight hours on site. Sometimes, I think the longest I ever spent was seventy-two.

SB: And were you well supplied?

AK: Oh yes.

SB: Well prepared for those eventualities?

AK: Yes. Because the Launch Control Center, as I said before, was many feet below the ground and then there was a support building, the Launch Control Center support building, right above the Launch Control Center itself. And there they have cook and they have the security police and the missile maintenance, some of the maintenance people, facilities manager, all stayed right there. And there was enough food there for a long time.

SB: Okay. Uh, any interesting encounters with animals?

AK: No. [laughs]

SB: Never ran into a rattlesnake? Uh ....

AK: No. [breaths a sigh of relief]

SB: We've had a lot of people tell us about encounters with animals.

AK: Oh, is that right?

SB: Um hmm. How were your relations with the people of South Dakota? Obviously good with one, for sure.

AK: Oh. No, nowhere in my Air Force career, and I've been around the world and fourteen county fairs, believe me, have I encountered anybody, or any people, that, that, that are like here, that live here in South Dakota. And that was one of the primary reasons that we wanted to raise our children and what not right here in South Dakota. It's just, it's just great. Uh, the people are great, the environment's great, and, uh, and I think that's probably one of the reasons why Rapid City environs is experiencing such a tremendous growth right now is all of the sudden it's not a well kept secret anymore.

SB: Uh, were there any tensions at all between the community and the Air Force and the missile silos?

AK: If there were, I wasn't aware of them.

SB: Okay. Uh, how were race relations?

AK: Uh, the Air Force has a program that, and I, when I was in they called it "social actions." And the Air Force was very, very sensitive to race relations. And so, uh, we just couldn't discriminate in any way, shape, or form. And, uh, so, that, as far as I was concerned, it was good.

SB: Um hmm. Relations with Native American communities?

AK: I had no problems with Native Americans. Or blacks. Still don't. I don't to this day.

SB: Um hmm. Okay. You were here when the '72 flood occurred, weren't you?

AK: Yes.

SB: Did you experience it?

AK: I was in the '72 flood.

SB: You want to tell us a little bit about that?

AK: I, uh, I was uh, at the time, I was engaged to a gal who was from Virginia and she was out visiting me. And we were up at the corner of Mountain View Road and Omaha. We'd just come out of a movie and we were going home to the apartment. And, I, uh, it was the ninth of June 1972, well the evening of the tenth, ninth and tenth.

SB: Right.

AK: And, uh, I started to see the street lamps go out right down the road. And it was raining and I happened to look up towards Bacon Park. And I saw this wall of water and it, it was maybe about five, six feet coming down. And there was a car in front of me and a car in the rear and, um, I was honking my horn 'cause all I had to do was make it across that Deadwood Avenue bridge there up on the hill and I'd a been okay. And, but the people in the car in front of me at least, were mesmerized by it. There was nothing I could do about it, so I finally put it in first gear, but I couldn't do it. The water just swept us right into the, uh, into the Rapid Creek. And the bottom line was, um, I lost my fiancée. Her name is on that--Janice Elaine Hall--her name is on the monument right now. And they never did find the pick-up truck. They found Elaine down by the ****[counter 479] feed plant. I was in the water. I probably, that's the closest to dying I ever came because I remember losing it under water. I made it to a tree. And I was just as blue as the day I was born.

SB: I'm really sorry for your loss, by the way.

AK: Yeah. Thank you. You know, it's, the flood was a horrible disaster. It really was. Uh, but, uh, there is so much good that has come out of that flood that it makes, it makes the tragedy of losing someone easier to take.

SB: How did the Air Force respond to it?

AK: The Air Force, I mean immediately responded, well along with the South Dakota National Guard. They were probably, between the National Guard and the Air Force, those were probably the two, the two organizations that effected most of that, most all the rescue operations.

SB: Okay. In, uh, 1985, the Air Force brought aboard the first female crew member. The mixed gender missile crew debuted in August in 1989. I'm kind of curious how you felt about that.

AK: I was skeptical at first. And the reason I was skeptical was, uh, there is no doubt in my ex-military mind that females, I know how that sounded, but that female, the females, there's a lot more intelligent females out there than males are, okay? And they could certainly handle the intellectual aspect of, uh, of, of missile duty. And they could certainly handle the stress of missile duty. What I objected to was the fact that they were down there in the Launch Control Center, uh, with a male. And there was just the two of them down there. And anything could happen. I had no problem with, and this was after I retired, all female crews, you bet. In a heart beat. But to mix 'em up, male and female, I think that was a mistake. If it happened, I don't know.

SB: And the mistake was because of the potential for ...

AK: Sexual ...

SB: Sexual relations between crew members, okay. Do you have any feelings about gays in the military?

AK: I think they shouldn't be there.

SB: Should not or?

AK: Should not.

SB: Um hmm. Did you ever serve with ...

AK: Because of morale.

SB: Did you ever serve with anyone you knew was gay?

AK: No. But I don't think they belong in the military. Because, uh, not because the can't do the job. That I don't think is an issue. It's a morale issue. Because, and I don't know what the percentage is, but the majority of military people are, are, are non-gay people. And there's a perception out there, and I don't think, it's just a morale problem. And, um, so I'm sure

gay people can do the job just as good as non-gay people can, but it's from a morale stand point. I don't think, I don't think they should be allowed in the military for that reason.

SB: Okay. Uh, let me see here. How's food?

AK: Great! I liked it. You know, that's a question it depends on who you ask. [laughter] But I'm a chow hound, so!

SB: So both on the LCF as a capsule crewman?

AK; Oh, I loved the Launch Control Center food. Now, there were certain cooks who were a little bit better than others, but, uh, you know, Thanksgiving time, uh, we always had a turkey with all the dressing and what not. Easter, it was an Easter ham. So I think the food was great.

SB: How'd the capsule crew get along with FMs and?

AK: We, really good. I mean if you didn't, then they could hurt you.

SB: Um hmm.

AK: I mean, you know they could, uh but I always paid a lot of attention to the FMS, Facility Managers and Flight Security Controllers and um the cooks.

SB: We're going to stop and flip the tape here.

AK: Sure

SB: Let it wind up. What was a typical alert like for you?

AK: The typical alert is, uh, we'd get into the pre-alert briefing, and that was usually right around seven o'clock in the morning, that would take about a half hour to forty-five minutes. And then we would, uh, all get together and we'd either, depending on the weather, sometimes we'd go out in a helicopter, sometimes we'd go out in two-and-a-half ton trucks, you know? And myself and my deputy would go out in the truck. If we were flying, then it would be two or three crews on the helicopter. They'd either fly or drive us out. We usually get out on site, if we were driving, it would probably be around ten o'clock in the morning. If we were flying, it's probably be about eight-thirty, nine o'clock. And, uh, we would go through a, uh, briefing topside with the facilities manager. Uh we would do our inspections topside of some of the equipment. And I would talk to the FSC, the Flight Security Controller. We'd pass our authentication codes back and forth, we'd establish the authentication codes. And then once that would happen, then we would call the Launch Control Crew, the

center crew that we were going to relieve and we would authenticate with them and they would open the door for us. Not the blast door, but the top-side one. And, uh, then we got in an elevator and we'd go down in the elevator, down, and by that time once the capsule crew had determined that the top-side door to the flight security offices was closed and locked and secured, then they'd start opening up the nine or ten ton blast door.

SB: Blast door?

AK: And then, um, by the time we got down there and the blast door was slowly swinging open, and, uh, it was really, you got to remember we tried to keep that blast door closed as much as possible because it did degrade the capsule when that was open. And then we'd go right into the capsule and we'd close the blast door again and lock the pins in and we'd do a crew changeover. After the crew changeover, we'd inventory the authentication codes and that kind of thing. After the changeover was accomplished, the old crew would go upstairs where they would either get in the truck that we brought out or they'd wait for a helicopter to come. And then the alert tour started. Uh, ninety percent or ninety-five percent of the time, uh, usually we'd just sit there. We would read magazines. Study for uh, the professional military PMA programs, or some people would work on their master's degree. It was a great time, at that time. And at that time they didn't allow any kind of t.v. sets or anything like that down there. It was just the crew. And, um, as I said before, there was one cot there and one crew member could go to sleep. And usually the person who had the graveyard shift--the midnight to six o'clock in the morning shift--usually that person would crawl into the cot right after dinner. Usually we'd have dinner right around five o'clock, so that person'd get in the cot and go to sleep from five, and then from five until about midnight. And then, um, and then uh, and then the deputy, uh the uh, at midnight then we'd swap off. And, uh, you'd get into, it was like a hot bunk and you'd sleep until about six o'clock in the morning. That was generally what took our tour.

SB: How often?

AK: Ah, yeah, those twenty-four hour tours would, I would say anywhere from seven to ten alerts a month, depending on manning.

SB: Did they have any way to observe the capsule crew? Was there closed circuit television? Anybody?

AK: No.

SB: You were strictly on your own?

AK: That's right.

SB: Now did you carry weapons in the capsule?

AK: Yes, yeah well...

SB: What was issued?

AK: .38s. Each one of us had a .38.

SB: And...

AK: And we had to have, we had to be armed any time we opened up the safe. Which is where we, we kept the 'go to war' codes.

SB: Uh-hum. Was there a standard operating procedure of, in terms of your colleague if, uh, uh, somebody lost it? I mean, under what circumstances would you use that weapon?

AK: Ah, I would use the weapon under any circumstances which endangered, endangered the 'go to war' codes, obviously. It was set up, the way the capsule was configured there was no way that one person could launch, initiate any kind of launch procedure. It's just, it's not possible.

SB: Uh-hum.

AK: So I think the only way that I would have used my .38 would have been if, uh, if for some reason the launch control center was in, in, in jeopardy. You know there were terrorists top-side or something like that, but again we had a nine-ton blast door between us too. So, you know, we were pretty secure down there.

SB: Uh-hum.

AK: I, I never heard, I've never heard of a crew member going off the deep end, so...

SB: Ever get claustrophobic?

AK: No, I didn't.

SB: Anybody you ever served with?

AK: No, no.

SB: What did you think about this escape tube?

AK: Ah, geez, that was a farce. [Laughter.]

SB: Can you tell us about the escape tube?

AK Yeah, oh yeah. You know, again as I alluded to, we always knew that we were going to, to, you know, all the missile fields were target areas for the Russians. And so we knew that there was going to be, if nuclear war ever occurred that, uh, the top-side would be gone. And we expected that and so, the, I don't know if it was the Boeing people, or the Air Force people, but somebody designed what they called an escape tube. It was, it was down by the missile combat crew commander's seat. And it was a tube that, that, that they had dug from the launch control center that was suspended on shock isolators, up through ninety feet of ground, up to the top. And it was, it was filled with sand. And, of course, we had crew members, we had uh, these big huge lug wrenches that we could, we could open this tube with. You know, it was, it was permanently sealed, but you could, you could also open it up with these lug wrenches. If the time ever came. What we, we presumed that we would use this escape tube because the elevator shaft would be covered with debris and what not, and we wouldn't be able to get out. And just, uh, they ran a test, they finally ran a test down here at Ellsworth. And I forget which site it was, but, uh they, they figured, well, they hadn't been, they hadn't opened up one of these escape tubes in many, many, many, many years. And so the decided to open one up. It was kind of interesting because when they opened it up, the sand had hardened. So you couldn't leave, you really, really couldn't get all the way up there, ninety feet through hardened sand. And then once they did get out through it, they found out that the entrance, to this so-called escape tube had been paved over, and was in the missile parking lot. [Laughter.]

SB: I often wondered if, uh, if the volume of the sand was more than the volume of the capsule?

AK: Uh, you put it, no, no, I, I, no, I, I thought of that originally. But if you've, if you've ever been down in one of these launch control centers, uh, you'll, you 'll notice, you'll notice that the, the capsule is suspended on four shocks isolators. And it's, there are batteries for the capsule, in case we went from diesel operation to battery operation. But we are always underneath the capsule, okay, and then below that there was a good six, seven feet. Oh no, no probably four, five feet. So I don't, no I don't think the volume of sand...

SB: Um hmm. But ...

AK: But it was hardened ...

SB: Yeah, but you don't really think you would have escaped through the tunnel?

AK: Ah, anything's possible. But it would have been real hard.

SB: So then the next question is: "What if you had"? Did you have orders? And where were you to go once you ....

AK: No, we, uh, you know that's a good question, because we didn't have anything that was post-attack.

SB: Um hmm.

AK: I guess it was to each his own, you know?

SB: I wonder if part of this might be the myth of survivability. You know, you've got to believe on one level that you might be able to survive in order to continue with that type of mission. Is that ...

AK: Oh yes. There was no doubt that we, I don't think we could have survived a direct hit with a nuclear weapon. But I mean, I think we could have because of the way we were, we could have survived uh, you know, a near miss, I guess. I don't know what you would call a near miss. But I think, I think I never, I always knew I'd survive.

SB: I've got another question for you. How many kilo tons were the war, or the warhead on a Minuteman II?

AK: You know, I can't remember that.

SB: Did they teach you? Or demonstrate to you via, you know, movies or whatever, what the damage was that this weapon could do?

AK: No.

SB: Okay. So you didn't really have a sense of ....

AK: Uh uh.

SB: You just knew it would make a big ...

AK: I knew that, and they did say, how many kilotons or megatons, or whatever it is, but I can't remember what it was.

SB: You just knew it would make a big dent someplace?

AK: Oh yes.

SB: Okay. Um, we talked about the, um, boredom on occasion and the need to, you know, there's a time to work and there's a time to play. Uh, I noticed that on Delta One on the steel door that closes the capsule they've got painted the Domino Pizza delivery motto and that's, uh, you know "Anywhere in the world in thirty minutes or your next one is free."

AK: Yeah.

SB: You know? Was there a particular sense of humor that uh ....

AK: Oh yeah. And it was kind of, and it was, and I can't, to be candid with you, remember all the sayings, but there was, you know. It kept the morale up.

SB: Um hmm.

AK: Yeah. Yup.

SB: So, to relieve the boredom in the capsule itself ...

AK: You read a lot. You really read a lot. Ah, and later on, it's my understanding, later on they allowed TV sets.

SB: Um hmm.

AK: But when we were pulling on alert there were no TV sets, so.

SB: Okay. Well, what would you call your most vivid memory of your missile experience?

AK: Probably being a task force commander and launching a missile out of Vandenberg.

SB: In Vandenberg? Watching a bird in flight?

AK: Yeah. We would actual launch a Minuteman III missile down to the Kwajalein atoll area.

SB: And it worked?

AK: Oh yes.

SB: Did its job well?

AK: Um hmm. Um hmm.

SB: Any humorous missile field experience that you recall?

AK: Well. I'm sure there were a lot of them, but I can't ... [laughter] You know its been fifteen, almost fourteen years since I retired. And that's been ...

SB: That's alright. So nothing stands out at this point?

AK: No.

SB: Uh, did you ever have cause to go to an LF?

AK: Yes. Yes. Uh, just out of curiosity.

SB: Uh hmm. Not officially?

AK: No. Not officially. Out of curiosity. When I was a squadron commander up at Minot, I did go out to the launch facilities a lot because I was responsible, directly responsible for the missiles up there.

SB: You know, when you talked about authentication codes, uh when you would come out to the LCF, did anybody ever forget them? Or have any problems with the security police? Anybody get jacked up on a crew coming out there, or?

AK: Uh, yeah. It happened occasionally. Yes.

SB: Can you tell us a little bit about what it, what happened?

AK: Well, yeah.

SB: In those events, under those circumstances?

AK: I can remember, I had one FSC, Flight Security Controller, call me up. I was on alert and I think it was out at Oscar right here in the 44th. And he called me and he said, "Sir," he says, "I've just discharged my weapon." And there was a long pause and I said "Would you please authenticate 'kilo whiskey'"? There was always a two digit, and he authenticated properly. So, I said "Are you okay? Is there any type of situation up there"? "No, sir. I was just fooling around and my weapon discharged." So I immediately had a line, what we called a direct line, a speed line right straight to Wing Security Control here at Ellsworth and I called up Wing Security Control and I told them what had happened. And that he authenticated okay.

SB: Um hmm.

AK: They came out. They sent a, dispatched a helicopter out, and immediately relieved him. And put another. And he had, what had turned out to be, was he was being bored and he was practicing his quick draw with his .38 and fired a shot right through the window.

SB: And he paid a price for it?

AK: That's right. He was decertified. Yeah.

SB: Okay. Do you know of any, or did you ever observe any launch enclosures being blown open by the ballistic actuators?

AK: Ah, none other than the missile I launched.

SB: At Vandenberg?

AK: At Vandenberg, Yeah.

SB: Um hmm. What's that like?

AK: Oh geez. It's uh awesome.

SB: Is the test site just like the LF here.

AK: Yes. Exactly.

SB: So there's the eighty ton ...

AK: Yes.

SB: closure that ...

AK: Yes, and it just bounces right back and it's boom!

SB: Now some people ...

AK: It's unbelievable.

SB: Some people expressed concern during the course of interviews that maybe in South Dakota winters where snow is piled high behind these lids that they might not have functioned properly. Do you think that would ...

AK: I, I don't think that, that would have been a concern. I saw one out at Vandenberg, and I mean it's the same, it's the same door. It's the same configured launch facility and what not. The same explosive actuators and

what not. And, uh, I don't think the snow, no. Because the way these doors were, were constructed with, it's, they were on a slight slant. So, when you got an eighty ton, uh, door that's moved a little bit, the gravitational pull is going to slide it down.

SB: There's ...

AK: And there could be, I don't care, five feet of snow and I'm sure ...

SB: The impetus alone will shove it back.

AK: Yeah.

SB: Okay. Um, were there major problems that you faced in accomplishing your assignment? Did you face shortages of personnel? Or shortages of equipment? Or?

AK: No. No. I can't say that we did.

SB: What would you say was your most significant accomplishment?

AK: Keeping the peace. And I really feel that, I really believe that. I really believe that what we were doing then contributed to keeping the peace. Yeah.

SB: And you see that as, uh, an important part of victory in the Cold War?

AK: Yes. Without a doubt. Without a doubt.

SB: Any personalities that you recall who were important? [laughter]

AK: I think everybody was important!

SB: Okay. Any legends? Any folklore? I've had people tell me about ghosts in launch facilities and, uh, nothing like that in your experience?

AK: Uh uh. No. No.

SB: Okay. Alright, I've got just a couple other questions and I think we'll be done, Andy. Um, what do you think about preserving Delta 1 and Delta 9?

AK: I think it, I think it's great. I think it's necessary. I think it's a, it's an important part not only of the local history, but more importantly, I think it's a history that needs to be preserved and I think it's a history that, that the American people should, should know about. I think it's a history that's

not, has not been, uh, promulgated so to speak, to the average American citizen out there.

SB: Um hmm.

AK: And I think that, uh, it would be a history that, uh, the average American citizen would, would appreciate and would be very interesting for them. And I think if they, if they opened up Delta 1 and, and configured it as it really was then, and what not, I think you get all kinds of tourists, you know, during the summer and what not through here, and I think really ...

SB: I tend to agree with you. When we went down into Delta 9, I grew up in South Dakota, and we used to drive from Mobridge to Rapid City for vacation and, you know, we'd see these missile silos and just, in the sixties and think "wow," expecting one to take off any moment, you know. I think you're right there. The follow up on that would be should we aid the Russians in developing a similar site for their people?

AK: I think it'd be a good idea. I really do.

SB: Okay.

AK: I think it would be a good idea. Something I've never given a thought to, but it's a good idea.

SB: Did you go out and witness any of the extractions when they deactivated?

AK: No.

SB: How did deac, did deactivation have a personal feeling for you? Or?

AK: No, it didn't. Uh, the only thing that I, I was glad was that the deactivation was occurring, because I've always said that there was too many missiles on alert.

SB: Um hmm.

AK: That we don't need that many missiles to accomplish the concept of deterrence. And even now, I mean there's, or so I'm told, that there's missiles, the MXs down at F. E. Warren, and there's missiles at Minot and Maelstrom. And I don't know if they still have the IRCs missiles down at Whiteman. I don't know, I think the Whiteman's might be down too. But we still, we still have a lot of missiles. I mean the MX has got ten MIRVs, you know? And, uh, and then given that with the tactical nuclear missiles in the Army and the, um, the Navy boomers, the SLBMs, we've still got too many, I think.

SB: Plus B-1, B-2, B-52s.

AK: I mean, yeah, really. Because when you think of the destructive power of a nuclear weapon, you know, it's not going to take a lot to, to cripple the United States or any other country for that matter.

SB: Okay. If you had it to do all over again ...

AK: I'd do it the same way. Without exception. With no regrets.

SB: Okay. Any other comments? Anything that I haven't asked you that you think I should?

AK: No. [laughter]

SB: Anything else then?

AK: No. No.

SB: Alright. Well, Andy Knight, I want to thank you very much for participating in this interview. We appreciate your time and your memories.

AK: Sure.

SB: And we appreciate the service you gave us.

AK: Oh, not a problem, Steve. Thank you!